

**REMARKS**

Claims 1-19 were rejected under 35 USC 103(a) as being unpatentable over Beeson, Jr., et al., U.S. Patent 5,396,543, in view of Bjorndahl, P. "CME 20- A Total Solution for GSM Networks". This rejection is respectfully traversed for the reasons set forth in the prior responses, and for the following reasons.

The Examiner contends (on page 9 of the Office Action) that Bjorndahl teaches establishing respective mobile telephone-specific data for defining a subscriber-contended control of actions in a mobile switching center since Bjorndahl teaches storing subscription parameters in the HLR. The HLR is a register (a database for subscriber data) and not a mobile switching center (MSC) that is a center for switching. The differences between these two terms of art is clearly understood by the skilled artisan, as exemplified in the attached definitions from Newtons Telecom Dictionary. Storing data in the HLR is therefore not storing data in an MSC. Hence, whether something is "established" in the HLR is not relevant. In any event, the term "established" is replaced by "set-up" (as used in the original translation) for added clarification.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 44912-2016200.

However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

By 

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# NEWTON'S TELECOM DICTIONARY

**The Official Dictionary of  
Telecommunications & the Internet**

- IP Telephony • LANs & Intranets • Call Centers & Computer Telephony
- Fiber Optics, SONET and DWDM • Satellites
- Voice, Data, Image & Video Networking • Wired and Wireless Telecom • VoIP • T-1, T-3, T-4, E-1, E-3 • ISDN & ADSL • Cable Modems • Cellular, PCS & GSM • Windows 95, 98, NT, NetWare, Apple, Sun & Unix Networking • Ecommerce

**Updated  
15<sup>th</sup>  
Expanded  
Edition**

**by Harry Newton**

to market a range of interoperable home networking solutions. [www.homepna.org](http://www.homepna.org).

**HomeRF** Home RF (Radio Frequency) Working Group. According to its Web site, the HRFWG "was formed to provide the foundation for a broad range of interoperable consumer devices by establishing an open industry specification for wireless digital communication between PCs and consumer electronic devices anywhere in and around the home." The Shared Wireless Access Protocol (SWAP) specification is intended to enable interoperability of electronic devices from a large number of manufacturers, while providing the flexibility and mobility of a wireless solution. SWAP is expected to yield a wireless home network to share voice and data between devices such as PCs, peripherals, PC-enhanced cordless phones, and devices yet to be developed. [www.homerf.org](http://www.homerf.org).

**Home Agent** A Mobile IP term. Mobile nodes associated with nomadic users register their presence at a remote location through a foreign agent. The foreign agent communicates with the home agent in order that data packets can be forwarded to the remote subnet. See also Mobile Agent and Mobile IP.

**Home Carrier** The cellular operating company which a subscriber is registered with and pays the monthly service charge and usage charges to.

**Home Location Register** HLR. A wireless telecommunications term: A permanent SS7 database used in cellular networks, including AMPS (Advanced Mobile Phone System), GSM (Global System for Mobile Communications), and PCS. The HLR is located on the SCP (Signal Control Point) of the cellular provider of record, and is used to identify/verify a subscriber; it also contains subscriber data related to features and services. The HLR is used not only when you are making a call within the area of coverage supported by your cellular provider of record. It also is used to verify your legitimacy and to support the features to which you subscribe when you are roaming outside that home area. In a roaming scenario, the local service provider queries the HLR via a SS7 link. Once verified, your data is transferred via SS7 to the VLR (Visitor Location Register), where it is maintained during your period of roaming activity within the coverage area of that provider. HLR is a key element of IS-41, the predominant wireless standard in North America. See also AMPS, GSM, IS-41, PCS, SCP, SS7 and VLR.

**Home Page** The classic definition: The front page of an "online brochure" about an individual or organization. The Internet definition: The first page browsers see of the information you have posted on your computer attached to the World Wide Web is your "home page." It's a "welcome" page. It says "Welcome to my site, my home." It typically contains some sort of table of contents to more information which a visitor (browser, surfer, etc.) will find at your site by clicking onto hypertext links you've created. In a Web site, a home page is usually called index.htm, index.html or index.asp. The biggest mistake made by people creating Web sites is that they fail to call their home page index.\* (that star depends on the operating system which the Web hoster is using). See HTML, Internet, Streaming and World Wide Web.

**Home Run** Phone system wiring where the individual cables run from each phone directly back to the central switching equipment. Home run cabling can be thought of as "star" cabling. Every cable radiates out from the central equipment. All PBXs and virtually all key systems work on home run cabling. Some local area networks work on home run wiring. See Loop Through.

**HomePNA** Home Phoneline Networking Alliance. An association of companies working toward the adoption of a single unified phoneline networking standard and bringing to market a range of interoperable home networking solutions using in-place phone wiring. HomePNA solutions are intended to be plug-and-play for networking of multiple PCs, peripherals (e.g., printers, scanners and video cameras), multi-player network games, home automation devices (e.g., environmental control and security systems), digital televisions and digital telephones. An all-purpose Home Area Network (HAN) using existing telephone wiring, the HomePNA solution also is intended as a means of shared access to IP voice and video networks, the IP-based Internet, and the conventional circuit-switched Wide Area Network (WAN). Network access technologies are intended to include analog, ISDN and xDSL local loops. Initial efforts are directed at a technology that will support spatial separation of nodes by as much as 500 feet which represents a home of up to 10,000 square feet (which is bigger than my home, and probably bigger than yours unless you are Bill Gates and live in a monstrosity of a castle in which case you probably already have an ATM-based LAN with SONET fiber optics pipes running at 10 Gbps, built digress), and running at data rates of 1 Mbps. Frequency Division Multiplexing (FDM) is intended to support simultaneous voice and data traffic; frequency ranges are intended to avoid interference from devices (e.g., refrigerators and air conditioners) found in the home. HomePNA solutions are based on an Ethernet derivative, running at 1 Mbps at frequencies above 2 MHz using a proprietary compression technique from Tut Systems, and using the CSMA/CD protocol native to Ethernet; speeds of 10 Mbps are planned in the future, with the theoretical potential being as much as 100 Mbps. Members include 2Com, AT&T, Compaq, Hewlett-Packard, IBM, Intel, Lucent and Tut Systems. [www.homepna.org](http://www.homepna.org). See also Ethernet, FDM, ISDN, SONET and xDSL.

**Homeostasis** The state of a system in which the input and output are exactly balanced, so there is no change.

**Homes Passed** An expressed of the number of dwellings that a CATV provider's distribution facilities pass by in a given cable service area and an expression of the market potential of the area.

**Homings** 1. When you dial a long distance number, your central office will choose a special set of trunks to send your call onto the next switching center for movement through the nationwide toll system. Those trunks are said to be the homing trunks for your central office. In other words, your central office is said to home on these trunks. If you're consistently encountering lousy long distance lines (and so are others on your central office), then ask your telephone company to check these trunks out.

2. Returning to the starting position, as in a rotary-stepping switch when its connection is released.

**Homo** 1. The Greek prefix meaning the same.

2. Home Office Mobile Office. See also SOHO, which stands for Small Office Home Office.

**Homogeneous Networks** Composed of similar hardware from the same manufacturer.

**Homologation** Conformity of a product or specification to international telephony connection standards. What this means in simple language is that you have submitted your product to a regulatory agency or a government testing agency in a foreign country and they have said that your product is OK for use and sale in that country and it is allowed to

panies (to track cars), to field service personnel, to law enforcement officials checking license plates.

**Mobile Data Base Station** MDSB. Component of the CDPD network that provides data link relay functions for a set of radio channels serving a cell. An MDSB is located in each cell site, and its primary role is to relay data between Mobile End System (M-ES) and the Mobile Data Intermediate System (MD-IS). It is the stationary network component responsible for managing interactions across the airlink interface.

**Mobile Data Intermediate System** MD-IS. The CDPD network element that performs routing functions based in knowledge of the current location of the M-ES. Responsible for CDPD mobility management. A cellular radio term.

**Mobile Data Link Protocol** MDLP. The Link Layer protocol used in Cellular Digital Packet Data (CDPD). Provides Temporary Equipment Identifier (TEI) management, multiple frame operation, unidata transfers, exception condition detection with selective reject recovery, etc.

**Mobile Digital Voice Channel** MDVC. The channel between a mobile phone and a cell site antenna in a digital cellular or PCS environment. The MDVC supports both voice and data transmission, although the allocated bandwidth is designed primarily to support voice. Signaling and control functions take place over separate channels set aside specifically for that purpose.

**Mobile End System** M-ES. An end system that accesses the CDPD network through the airlink interface. The device that allows mobile users to work in an untethered fashion while remaining connected to a data network. The system's physical position may change during data transmission. A cellular radio term.

**Mobile Home Function** A Mobile Data Intermediate System, that (1) maintains an information database of the current serving area of each of its homed Mobile End Systems (M-ESs), and (2) operates a packet forwarding service for its homed M-ESs. A cellular radio term.

**Mobile Identification Number** When the "SEND" key on a cellular phone is pressed, the phone transmits an origination message to the base station. This message includes the dialed digits and the identity of the calling cellular phone. The calling cellular phone is identified by its Mobile Identification Number (MIN), which is usually the same as its ten-digit phone number. See also ESN.

**Mobile IP** An emerging set of extensions to the Internet Protocol for packet data transmission, Mobile IP is intended to serve nomadic users connecting on a wireline, rather than a wireless, basis. Mobile IP is being developed by the IETF (Internet Engineering Task Force) to operate much like a highly secure and dynamic packet data communications version of a postal service forwarding address. The benefit is that the nomadic user will not have to continually change IP addresses and reinitialize sessions. It will work like this:

The mobile node will have one permanent address and another for location purposes and another for identifying it to other network nodes. Data will be transmitted to the permanent address, associated with the "home agent." When the nomadic node is traveling, the "home agent" will forward the data in care of the "foreign agent," the IP server serving the foreign subnet, through a process of encapsulating that data with another IP address contained in a data header preceding the original packet. Once the data packets are received by the foreign agent, the additional header will be removed through a process known as decapsulation. Should the node relocate another time, both the "home agent" and the previous for-

eign agent will be advised of that fact; thereby, inflight packets can be forwarded by the previous foreign agent to the new foreign agent through a process known as "smooth handoff." While there currently is no Mobile IP standard being developed for wireless mobility, Mobile IP promises to make life easier for users that roam from location to location within a multisite corporate enterprise. See also IP.

**Mobile Mounting Kit** An optional cellular phone accessory that allows a transportable or portable to be connected to a vehicle's power supply and antenna lead, thereby boosting power and improving reception. Sometimes referred to as a car kit or car mounting kit. Some of these kits are very expensive. Check the price of the kit before you buy your phone.

**Mobile Network Location Protocol** MNLP. A cellular radio term. In the CDPD network, the MNLP is the protocol used between the Home Mobile Data Intermediate System (MD-IS) and the Serving MD-IS and it used to keep the Home MD-IS updated on the location of a Mobile End System (M-ES) (i.e. the location of the cell phone).

**Mobile Network Registration Protocol** MNRP. In the CDPD cellular radio network, protocol used between the Mobile End System (M-ES) and the Serving Mobile Data Intermediate System (MD-IS) to announce the M-ES's Network Entity Identifier (NEI) and to confirm the service provider's willingness to provide service.

**Mobile Phone** One term for a cellular phone. There are four main types of cellular phones — mobile (also called car phone), transportable, portable and personal. A mobile phone is attached to the vehicle, the vehicle's battery and has an external antenna. The mobile phone (the car phone) transmits with a standard three watts of power. Mobile telephone service is provided from a broadcast point located within range of the moving vehicle. That range is called a "cell." The broadcast point in turn is connected to the public network so that calls can be completed to or from any stationary telephone, i.e. one connected to a land line. See Cellular and Car Phone.

**Mobile Phone Jammer** A device which transmits radio waves at cell phone frequencies causing it to jam communications between cell phones and their base station. The main purpose of a mobile phone jammer is to stop cell phones from receiving phone calls. The first mobile phone jammer came out of Israel in the summer of 1999. Costing around \$1000, the device allegedly shut off all phone calls coming into cell phones in a room. Customers for such devices include recording studios, cinemas and concert halls. There is some speculation that the device may be illegal. [www.cguard.com](http://www.cguard.com).

**Mobile Serving Function** MSF. A Mobile Data Intermediate System (MD-IS) function that (1) maintains an information database of the Mobile End Systems (M-ES) currently registered in the serving area, and (2) de-encapsulates forwarded packets from the MHF and routes them to the correct channel stream in a cell where the destined M-ES is located.

**Mobile Switching Center** MSC. The location of the Digital Access and Cross-connect System (DACS) in a cellular telephone network.

**Mobile Telematics** Sometimes just called telematics. It involves integrating wireless communications and (usually) location tracking devices (generally GPS) into automobiles. The best known example is GM's OnStar system, which automatically calls for assistance if the vehicle is in an accident. These systems can also perform such functions as remote